

Western Ecological Research Center <http://www.werc.usgs.gov>

## Kern Field Station

The historic Tulare Lake Basin once held the largest freshwater ecosystem in western North America and was the wintering home to millions of migratory waterfowl and shorebirds. Intensive irrigated agriculture and urban growth have caused a loss of over 95 percent of historical wetlands, and the remainder are subject to degradation by contaminants, saline groundwater, pesticides, and increasing recreational use. The added influence of introduced exotic annual grasses has altered the arid landscape to such an extent that a number of once abundant vertebrate and plant species are now at risk of extinction.

The Kern Field Station in California's San Joaquin Valley is strategically located near the historic lake basin. The field station was established in 1985 to investigate the ecological ramifications of saline agricultural drainage water on waterfowl and shorebirds. Co-located with the U.S. Fish and Wildlife Service's Kern National Wildlife Refuge, the field station has expanded and now collaborates with other federal, state, university, and private groups on investigations of agricultural drainage water use, on research into endangered species ecology, and on restoration efforts at the hypersaline Salton Sea in Southern California. The research conducted at the station provides technical support to the U.S. Fish and Wildlife Service, California Department of Water Resources, Bureau of Land Management, California Regional Water Quality Control Board, Bureau of Reclamation, and other client agencies.

Examples of ongoing research include studies on endangered species and livestock grazing, migratory bird use of selenium-contaminated evaporation ponds, and migratory birds at the Salton Sea.



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### Science Expertise

**Douglas A. Barnum, Ph.D.**, Research Wildlife Biologist

- Ecology of hypersaline ecosystems
- Waterfowl and shorebird ecology
- Endangered species ecology in arid ecosystems
- Agricultural impacts on wildlife

### For more information, contact:

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